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GRIFFIN & SZIPL, PC
SUITE PH-1
2300 NINTH STREET, SOUTH
ARLINGTON, VA 22204

EXAMINER	
ROSENAU, DEREK JOHN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/596,033	DALLA PIAZZA ET AL.	
	Examiner	Art Unit	
	Derek J. Rosenau	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-24* is/are pending in the application.

4a) Of the above claim(s) *24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/25/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 12-23, drawn to an electronic component.

Group 2, claim(s) 24, drawn to a method of manufacturing an electronic component.

2. The inventions listed as Groups 1 and 2 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the apparatus of group 1 can be made by methods that do not require the details of the method of group 2, such as methods that do not require heating or the sequence of assembly described in claim 24.

3. During a telephone conversation with Joerg-Uwe Szipl on 20 April 2009 a provisional election was made without traverse to prosecute the invention of group 1, claims 12-23. Affirmation of this election must be made by applicant in replying to this Office action. Claim 24 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder**. Further, note that the prohibition against double

patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 12-15, 17-19, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (US 2003/0168944) in view of Luff (US 6456168).

8. With respect to claim 12, Shimizu et al. discloses an electronic component (Figs 1-6) comprising at least one resonator element (item 2) arranged in a first housing of a case (Figs 1-5), the case comprising: a main part with a base (item 4); and a cover (item 3) fixed onto the main part to hermetically seal the first housing of the case (Paragraph 15), wherein at least one portion of the cover is transparent to a determined wavelength of a light beam to allow the resonator element to be optically adjusted (Paragraph 23), wherein the main part is made of a hard material (Paragraph 26).

Shimizu et al. does not disclose expressly at least one lateral wall of annular shape, that the cover is fixed onto a rim of the lateral wall of the main part, or that one part of the rim surrounds at least certain portion of a lateral surface of the cover to ensure protections of the electronic component against shocks.

Luff teaches an electronic component that includes a resonator element including at least one lateral wall of annular shape (Fig 3), wherein the cover (item 160) is fixed

onto a rim of the lateral wall of the main part (Fig 3), and that one part of the rim surrounds at least certain portions of a lateral surface of the cover to ensure protection of the electronic component against shocks (Fig 3).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the lateral wall of Luff with the resonator element of Shimizu et al. for the benefit of reducing the size of the finished package (column 1, lines 14-48 and column 3, lines 8-10 of Luff).

9. With respect to claim 13, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 12. Shimizu et al. discloses that the hard material is a ceramic material (Paragraph 26).

10. With respect to claim 14, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 12. Luff discloses that a height of the one part of the rim surrounding the lateral surface of the cover is larger than or equal to a thickness of the cover fixed onto the rim (Fig 3), wherein the one part of the rim entirely surrounds the lateral surface of the cover (Figs 1-3).

11. With respect to claim 15, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 12. Shimizu et al. discloses that the transparent cover is a glass cover (Paragraph 21).

12. With respect to claim 17, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 12. Luff discloses that a space is provided between the lateral surface of the cover and the one part of the rim surrounding the cover (Fig 3). While Luff does not explicitly disclose that the space is substantially of

smaller dimensions than the thickness of the cover, it has been held that a mere change in relative dimensions of a device is obvious (*Gardner v. TEC Systems Inc.*, 220 USPQ 777). Therefore, as the goal of Luff is to reduce the size of the package, and as it has been held that the mere change in relative dimensions is obvious, it would have been obvious to a person of ordinary skill in the art to adjust the dimensions of the lateral walls of Luff such that the space is substantially of smaller dimensions than the thickness of the cover for the benefit of further educing the size of the package, which is the stated goal of Luff.

13. With respect to claim 18, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 12.Shimizu et al. discloses that the housing of the main part of the case that includes the resonator element is vacuum sealed (Paragraph 23), wherein the resonator element is a quartz resonator (Paragraph 21) adjustable by a laser beam through the transparent portion of the cover (Paragraph 23), said quartz resonator comprising a tuning fork with two parallel arms (Fig 6) connected to each other by a bridge (Fig 6) and carrying electrodes to make the arms vibrate (Paragraph 15). Luff discloses that the main part of the case further includes at least one stud (items 172 and 174) secured to the base onto which the tuning fork is fixed, and said electrodes are electrically connected through the main part of the case to external connection terminals (items 175, 177 and column 4, lines 33-39).

14. With respect to claim 19, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 12. Luff discloses an oscillator circuit electrically connected to the resonator element (items 180-184 and Abstract).

15. With respect to claim 21, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 12. Shimizu et al. discloses a getter type material (item 1) is arranged in the housing of the resonator element to act as a vacuum pump when activated (Paragraph 23).

16. With respect to claim 22, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 21. Shimizu et al. discloses that the getter type material is a layer of evaporated titanium or chromium in the housing of the resonator element (Paragraph 15), and wherein this layer of titanium or chromium is disposed to be activated by means of a laser beam through the transparent portion of the cover so as to act as a vacuum pump and lower the oscillation frequency of the resonator element (Paragraphs 23 and 29).

17. With respect to claim 23, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 22. Shimizu et al. discloses that the getter type material is disposed on a part of the inner face of the cover (Fig 2).

18. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. in view of Luff and Kizaki et al. (US 5841217).

19. With respect to claim 16, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 12.

Neither Shimizu et al. nor Luff discloses expressly that the rim of the main part of the case receiving the cover includes a first annular layer of gold plating, wherein a periphery of an inner face of the cover includes a second annular layer of gold plating, and wherein the cover is welded onto the rim using a metal alloy preform arranged

between the first annular layer of gold plating and the second layer of gold plating, wherein the metal alloy is formed of tin and gold.

Kizaki et al. teaches an electronic component including a resonator element and in which the rim of the main part of the case receiving the cover includes a first annular layer of gold plating (item 18, column 7, lines 47-51), wherein a periphery of an inner face of the cover includes a second annular layer of gold plating (column 6, lines 13-20), and wherein the cover is welded onto the rim using a metal alloy preform arranged between the first annular layer of gold plating and the second layer of gold plating, wherein the metal alloy is formed of tin and gold (column 4, lines 46-54).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the base-cover attachment materials of Kizaki et al. with the resonator element of Shimizu et al. as modified by Luff for the benefit of increasing the strength of the airtight bond (column 6, lines 21-24 of Kizaki et al.).

20. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. in view of Luff and Kondo et al. (US 5949294).

21. With respect to claim 20, the combination of Shimizu et al. and Luff discloses the electronic component according to claim 19.

Neither Shimizu et al. nor Luff discloses expressly that the oscillator circuit is arranged in a second housing of the main part, wherein the second housing is delimited by the lateral wall and the base, and the second housing is arranged on an opposite face of the base to the first housing of the resonator element, wherein said oscillator circuit is encapsulated in the second housing by a resin and is electrically connected to

external connection terminals of the electronic component, and wherein the base of the main part of the case includes electrical connection paths for electrically connecting the oscillator circuit and the resonator element.

Kondo et al. teaches an electronic component including a resonator element (Fig 18) in which the oscillator circuit (item 2) is arranged in a second housing of the main part (item 1), wherein the second housing is delimited by the lateral wall and the base (Fig 18), and the second housing is arranged on an opposite face of the base to the first housing of the resonator element (Fig 18), wherein said oscillator circuit is encapsulated in the second housing by a resin (item 23) and is electrically connected to external connection terminals (items 11 and 14) of the electronic component, and wherein the base of the main part of the case includes electrical connection paths (items 11-14) for electrically connecting the oscillator circuit and the resonator element.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the second housing and resin of Kondo et al. with the resonator element of Shimizu et al. as modified by Luff for the benefit of providing electromagnetic shielding between the components of the device (column 6, lines 7-13 of Kondo et al.).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek J. Rosenau whose telephone number is (571) 272-8932. The examiner can normally be reached on Monday thru Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quyen Leung/
Supervisory Patent Examiner, Art Unit 2834

/D. J. R./
Examiner, Art Unit 2834